

REMARKS

Reconsideration and allowance of the present application based on the above amendments and the following remarks is respectfully requested.

Claims 1-44 and 52 are pending in the Application, claim 52 being newly presented herein with claims 45-51 being canceled. Claims 16, 17, 29, 20, 22, 24, 25, 26, 33, 34 and 35 have been amended to depend only from elected claims and to put them in proper multiple-dependent form.

The Examiner rejected claim 18 under 35 U.S.C. § 112, second paragraph. Applicant has amended claim 18 to clarify the intended meaning and thus requests that the rejection be withdrawn.

The Examiner rejected claims 12, 18, 20 and 21 under 35 U.S.C. § 102(e) as being anticipated by Togino et al. ('025); claims 12-14, 18, 20 and 21, under 35 U.S.C. § 102(e) as being anticipated by Takahashi ('194); claims 12-14, 18, 20 and 21, under 35 U.S.C. § 102(e) as being anticipated by Togino ('823); and claims 12-14, 18, 20 and 21, under 35 U.S.C. § 102(e) as being anticipated by Hayakawa et al. ('656). Applicants respectfully submit that the amendment to claim 12 obviates these rejections for at least the following reasons.

Claim 12 now recites "the first surface is identical in surface shape with the third surface." This amendment is fully supported by the original disclosure. For example, see page 67, lines 27-~~38~~²⁸ of the specification. The optical system of Fig. 7 (Example 7) is the same as that of Fig. 3 (Example 3). The numerical data on Example 3 indicates that both the first and the third surface are of planar shape.

None of the references of record, whether considered individually or combined, teaches or suggests the features now recited in claim 12. In particular, U.S. Patent 5,768,025 shows in Figures 5, 19 and 20 that the first surface 3 is different in shape from the third surface. In regard to U.S. patent No. 5,699,194, Figures 6-9 therein all show that the first surface 14 (or 14 and 11) is different in shape from the third surface 12. Similarly, in U.S. Patent No. 6,034,823, Figure 2(a) shows that the first surface 3 is different in shape from the third surface 8.

Finally, Figure 6(a) of U.S. Patent No. 5,1097,656 shows that the first surface 3 is different in shape from the third surface 8. Therefore, applicant respectfully submits that all elected claims are patentable over all references of record and requests that the rejections be withdrawn.

Furthermore, claim 18 recites "the first and third surfaces are planar shaped surfaces. None of the references of record teaches or suggests such a feature, as recited. Therefore, this provides another basis of patentability.

New claim 52 is similar to claim 12 in that it finds support in the elected embodiment.

Applicants respectfully submit that claim 52 is in condition for allowance.

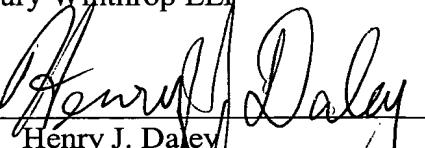
In view of the foregoing, the claims are now believed to be in form for allowance, and such action is hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, he is kindly requested to contact the undersigned at the telephone number listed below.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached Appendix is captioned "Version with markings to show changes made".

All objections and rejections having been addressed, it is respectfully submitted that the present application is in a condition for allowance and a Notice to that effect is earnestly solicited.

Respectfully submitted,

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Enclosure: Appendix



APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

12. (Amended) An image observation apparatus comprising image forming means and an ocular optical system having an action by which an image formed by said image forming means is led to an eyeball of an observer,

wherein said ocular optical system includes at least a prism member,

said prism member having at least four optical surfaces having a transmitting or reflecting optical action, wherein a space surrounded by said at least four optical surfaces is filled with a single medium having a refractive index (n) larger than 1 ($n > 1$),

said at least four optical surfaces including a first surface having both a transmitting action and a reflecting action and disposed on a side of said prism member that is closer to said observer's eyeball; a second surface having a reflecting action and disposed to face said first surface across said medium, said second surface being at least decentered or tilted with respect to an observer's visual axis; a third surface having a reflecting action and disposed to face said first surface across said medium at a position substantially adjacent to said second surface; and a fourth surface disposed such that one end thereof is substantially adjacent to said first surface, and the other end thereof is substantially close to said third surface,

wherein at least said third surface has a totally reflecting action, and said first surface, said single medium and said third surface are arranged to have an external-scene observation action by which an external scene can be observed through said first surface, said single medium and said third surface, and

wherein the first surface is identical in surface shape with the third surface.

16. (Amended) An image observation apparatus according to any one of claims 12 to [15] 14, wherein said first surface and said third surface are formed from curved surfaces, respectively.

17. (Amended) An image observation apparatus according to any one of claims 12 to [16] 14, wherein said first surface and said third surface are formed from spherical surfaces, respectively.

18. (Amended) An image observation apparatus according to any one of claims 12 to 14, wherein said first surface and said third surface are [formed from plane] planar shaped surfaces[, respectively].

19. (Amended) An image observation apparatus according to any one of claims 12 to [18] 14, which satisfies the following condition:

$$-0.5 \leq \phi_{t1} \leq 0.5 \text{ (1/millimeter)} \quad \dots(3)$$

where ϕ_{t1} is a composite power of said first and third surfaces at respective arbitrary regions thereof.

20. (Amended) An image observation apparatus according to [any one of claims] claim 12 [to 19], wherein said prism member is fixed at a same position regardless of whether the observer views the image formed by said image forming means or an image of the external scene.

22. (Amended) An image observation apparatus according to any one of claims 12 to [19] 14, wherein said prism member has switching means that causes observation modes to change between observation of the image formed by said image forming means and observation of an image of the external scene, said switching means having a function of moving said prism member.

24. (Amended) An image observation apparatus according to claim 22 [or 23], wherein said switching means causes said prism member to move along a plane containing an optical path of an axial principal ray.

25. (Amended) An image observation apparatus according to claim 22 [or 23], wherein said switching means causes said prism member to move in a direction perpendicular to the observer's visual axis.

26. (Amended) An image observation apparatus according to claim 22 [or 23], wherein said switching means causes said prism member to rotate.

33. (Amended) An image observation apparatus according to [any one of claims 10, 14 to 26 and 32] claim 12, further comprising positioning means for positioning said image forming means and said ocular optical system with respect to an observer's head.

34. (Amended) An image observation apparatus according to [any one of claims 10, 14 to 26, 32 and 33] claim 12, further comprising support means for supporting at least a pair of said image observation apparatuses at a predetermined spacing.

35. (Amended) A prism optical element or prism member according to [any one of claims 1 to 10 and 27 to 34] claim 12, wherein said second surface and said third surface act as different surfaces in terms of optical action but are formed structurally from a single surface.